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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,425

04/05/2005

Kees Gerard Willem Goossens

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EXAMINER

DRABIK, SARAH E

ART UNIT

PAPER NUMBER

2455

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/530,425	<b>Applicant(s)</b> GOOSSENS, KEES GERARD WILLEM	
	<b>Examiner</b> SARAH E. DRABIK	<b>Art Unit</b> 2455	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This action is responsive to the amendment filed on December 16, 2008. Claims 1-2, 4, and 6 were amended. Claims 7-16 were newly added. In response to amendments and clarifications made by the Applicant, the previous objections to the abstract and specification are withdrawn.

Claims 1-16 are currently pending.

### ***Drawings***

2. The drawings are objected to because, although the previously objected labels appear to have been corrected, the drawings are blurred and difficult to read. Retransmission is requested. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are

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not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claim 1, lines 11 and 20, the address translation means is disclosed as determining which module S is being addressed in the received message. However, line 4 indicates that there is only a single module S. On lines 13 and 23, "the selected location" has no antecedent basis. On line 13, the address translation means is disclosed as determining the selected location of the addressed module S based on the second information of the single address. However, line 5 indicates that the second information indicates a location *within* module S. On lines 17 and 19, "said translation unit" has no antecedent basis.

For claim 6, line 10, the translation unit is disclosed as determining which module S is being addressed in the received message. However, line 4 indicates that there is only a single module S. On line 12, "the selected location" has no antecedent basis.

For claim 7, line 1, "said interface means" has no antecedent basis. On line 2, "said master" also has no antecedent basis. Line 2 also recites "said addressed modules"; however, line 4 indicates there is only a single addressed module.

Claim 8, line 1, recites "the method according to claim 5". However, claim 5 recites an integrated circuit.

Claim 14, line 1, recites "the method according to claim 1". However, claim 1 recites an integrated circuit. Also on line 1, "the addressed module" has no antecedent basis, but seems to refer back to the addressed module S previously recited.

Claim 15, line 1, recites "the method according to claim 2". However, claim 2 recites an integrated circuit. Also on line 1, "said at least one network interface" has no antecedent basis, but seems to refer back to the at least one interface means previously recited.

For claim 16, line 1, "said at least one network interface" has no antecedent basis, but seems to refer back to the at least one interface means previously recited.

Claims 2-5 and 9-13 are rejected as being dependent on a rejected claim.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-4, 6-8, 10, and 12-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Godfrey (US 6,768,742).

Godfrey discloses the invention as claimed, including a computer chip having a plurality of internetworked modules that are identified by an ICMA address comprising a network identifier and a module identifier (Godfrey, Summary).

For claim 1, Godfrey discloses an integrated circuit comprising the following: a plurality of modules and a network arranged for transferring messages between these modules (see col. 1, lines 50-53; col. 2, lines 2-3; and Fig. 3), wherein a message issued by a first module M comprises first information indicative of a location of an addressed module S within the network, and second information indicative of a location within the addressed module S (see col. 2, lines 11-25, and col. 7, lines 6-16); and at least one address translation means for receiving the message issued by the first module M comprising the first and second information and arranging the first and the second information as a single address (see, for example, col. 8, lines 42-46, and Fig. 5), wherein the address translation means is adapted to perform the following:

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determine which module S is being addressed in the received message based on the first information of the single address (see col. 7, lines 12-16);

further determine the selected location of the addressed module S based on the second information of the single address (see col. 7, lines 6-9);

arrange, at the translation unit, the first and the second information comprising the message as a single address (see col. 8, lines 42-46);

determine, at the translation unit, which addressed module S is being addressed in the message issued from the first module M based on the single address (see, for example, col. 1, line 65 – col. 2, line 2; and col. 7, lines 3-6); and

further determine, at the translation unit, the selected location of the addressed module S based on the single address (see, for example, col. 1, line 65 – col. 2, line 2; and col. 7, lines 3-6).

For claim 2, Godfrey additionally discloses at least one interface means associated to one of the modules for managing communication between one of the associated modules and the network, wherein one of the address translation means is arranged in one of the interface means (see col. 8, lines 39-49, and Fig. 5).

For claim 3, Godfrey additionally discloses that the address translation means is arranged in the interface means associated to the first module (see col. 8, lines 39-49, and Fig. 5).

For claim 4, Godfrey further discloses that the address translation means comprises an address mapping table configured to store relations between global and

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local memory mapping (see, for example, col. 2, lines 16-18; col. 6, lines 60-67; and col. 8, lines 50-52 and lines 61-65).

For claim 6, Godfrey discloses a method for exchanging messages in an integrated circuit comprising a plurality of modules, the messages between the modules being exchanged via a network (see col. 1, lines 50-53; col. 2, lines 2-3; and Fig. 3), wherein a message issued by a first module M comprises first information indicative of a location of an addressed module S within the network, and second information indicative of a location within the addressed module S (see col. 2, lines 11-25, and col. 7, lines 6-16), comprising the following:

the first module M issuing a message to an address translation unit (see, for example, col. 8, lines 42-46, and Fig. 5);

arranging, at the translation unit, the first and the second information comprising the message as a single address (see col. 8, lines 42-46);

determining, at the translation unit, which module S is being addressed in the message issued from the first module M based on the single address (see, for example, col. 1, line 65 – col. 2, line 2; and col. 7, lines 3-6); and

further determining, at the translation unit, the selected location of the addressed module S based on the single address (see, for example, col. 1, line 65 – col. 2, line 2; and col. 7, lines 3-6).

For claim 7, Godfrey additionally discloses that the interface means is associated with one of the master and addressed modules (col. 8, lines 39-49, and Fig. 5).



For claim 8, Godfrey further discloses that communication between the plurality of modules is performed over connections (see col. 3, lines 51-56, and Figs. 2 and 3).

For claim 10, Godfrey further discloses that connection types comprise simple connections, multicast connections, and narrowcast connections (see col. 5, lines 21-30, and Fig. 3).

For claim 12, Godfrey further discloses that the simple connection is a connection between a message sending module and a single addressed module (see, for example, in Fig. 3, the connection between modules 30A and 30B).

For claim 13, Godfrey further discloses that the multicast and narrowcast connections are connections between a message sending module and one or more addressed modules (see Fig. 3).

For claim 14, Godfrey additionally discloses that the addressed module has an address comprised of a global and a local address (see, for example, col. 7, lines 6-16).

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Godfrey in view of Mahler et al. (US 6,381,638).

Godfrey discloses the invention substantially as claimed, including a computer chip having a plurality of internetworked modules that are identified by an ICMA address comprising a network identifier and a module identifier (Godfrey, Summary).

For claim 5, Godfrey discloses all subject matter of the claimed invention as discussed above with respect to claim 4, with the exception of the address mapping table containing fields for every channel of a connection, for network interface ports of a connection, and for local addresses in addressed modules. However, Mahler et al. from the same or similar field of endeavor do disclose this limitation (see col. 8, lines 56-67, and Figs. 6 and 7). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the specific mapping table fields disclosed by Mahler et al. in the address mapping tables of Godfrey, the motivation for doing so being to provide more complete information about a given module.

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11. Claims 9, 11, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Godfrey in view of Sgroi et al. ("Addressing the System-on-a-Chip Interconnect Woes Through Communication-Based Design").

Godfrey discloses the invention substantially as claimed, including a computer chip having a plurality of internetworked modules that are identified by an ICMA address comprising a network identifier and a module identifier (Godfrey, Summary).

For claim 9, Godfrey discloses all subject matter of the claimed invention as discussed above with respect to claim 8. However, Godfrey does not specifically state that a connection comprises a set of channels, each channel having a set of connection properties between a first module and at least one second module. But Sgroi et al. from the same or similar field of endeavor do disclose this limitation (see, for example, Section 3.1, sixth paragraph). Thus, it would have been obvious to one of ordinary skill in the art at the time of the endeavor to have used the channels described by Sgroi et al. in the integrated circuit network of Godfrey, since such channels are necessary to physically implement the required connections.

For claim 11, the combination of Godfrey and Sgroi et al. disclose all subject matter of the claimed invention as discussed above with respect to claim 9. Additionally, Sgroi et al. further teach that connection properties comprise ordering, flow control, throughput, latency, lossiness, transmission termination, transaction completion, data correctness, priority, and data delivery (see, for example, Section 3.1, sixth paragraph). Thus, it would have been obvious to one of ordinary skill in the art at the time of the endeavor to have used the specific connection properties described by Sgroi

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et al. in the integrated circuit network of Godfrey, in order to optimize inter-modular communication.

For claim 16, Godfrey discloses all subject matter of the claimed invention as discussed above with respect to claim 2. However, though Godfrey does disclose that the modules perform and communicate operations (see, for example, col. 5, lines 16-21, and col. 6, lines 20-24), he does not specifically state that these operations must include read and write requests. But Sgroi et al. from the same or similar field of endeavor do disclose this limitation (see, for example, Section 3.1, sixth paragraph). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have allowed the specific read and write requests described by Sgroi et al. to be communicated in the integrated circuit network of Godfrey, in order to allow a group of modules to cooperate in completing a given task or calculation.

12. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Godfrey in view of Hartmann (US 6,018,782).

Godfrey discloses the invention substantially as claimed, including a computer chip having a plurality of internetworked modules that are identified by an ICMA address comprising a network identifier and a module identifier (Godfrey, Summary).

For claim 15, Godfrey discloses all subject matter of the claimed invention as discussed above with respect to claim 2. However, Godfrey does not specifically disclose that the at least one network interface comprises at least two network interface ports to allow a module associated with said at least one network interface to

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communicate with a router network or at least one other module from among said plurality of modules. But Hartmann from the same or similar field of endeavor does disclose this limitation (see, for example, col. 1, line 62 – col. 2, line 3; and col. 3, lines 55-58). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the multiple ports described by Hartmann in the integrated circuit network of Godfrey, since such ports are necessary to actually implement physical connections and send and receive data between modules.

### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references listed on Form 892 are cited to show systems which are believed to be pertinent to the claimed invention.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SARAH E. DRABIK whose telephone number is (571)270-3990. The examiner can normally be reached on Monday through Friday, 8:00 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Najjar Saleh can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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